		Flight-Testing Newto	n's Laws
		2005 Science	e
		Curriculum Stand	dards
South Carolina Sci	ence		
Grades 9-12 (High	School Physical	Science)	
Activity/Lesson	State	Standards	
-			Explain how changes in velocity and time affect
Session-10 (1-5)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
, ,			Explain how acceleration due to gravity affects
Session-10 (1-5)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-10 (1-5)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-10 (1-5)	SC	SCI.9-12.PS-5.8	related to force.
			Explain how changes in velocity and time affect
Session-1 (1-17)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
			Explain how acceleration due to gravity affects
Session-1 (1-17)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-1 (1-17)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-1 (1-17)	SC	SCI.9-12.PS-5.8	related to force.
			Explain how changes in velocity and time affect
Session-2 (1-10)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-2 (1-10)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-2 (1-10)	SC	SCI.9-12.PS-5.8	related to force.
			Explain how changes in velocity and time affect
Session-3 (1-6)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
			Explain how acceleration due to gravity affects
Session-3 (1-6)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-3 (1-6)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
		0010 10 00 = 5	Use the formula F = ma to solve problems
Session-3 (1-6)	SC	SCI.9-12.PS-5.8	related to force.
		0010 10 50 50	Explain how changes in velocity and time affect
Session-4 (1-11)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
0 : 5 (4.0)		0010 10 50 50	Explain how changes in velocity and time affect
Session-5 (1-6)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
0 : 5 (4.0)		0010 10 50 = =	Explain how acceleration due to gravity affects
Session-5 (1-6)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.

			Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-5 (1-6)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-5 (1-6)	SC	SCI.9-12.PS-5.8	
			Explain how changes in velocity and time affect
Session-6 ( 1-8)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
			Explain how acceleration due to gravity affects
Session-6 ( 1-8)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-6 ( 1-8)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-6 ( 1-8)	SC	SCI.9-12.PS-5.8	
0 : 7(4.5)		0010405050	Explain how changes in velocity and time affect
Session-7 (1-5)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
Oi 7 (4.5)	00	0010400055	Explain how acceleration due to gravity affects
Session-7 (1-5)	SC	501.9-12.25-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session 7 (1.5)	sc	SCI 0 12 DS 5 7	acceleration; and action and reaction forces.
Session-7 (1-5)	30	301.9-12.63-3.7	Use the formula F = ma to solve problems
Session-7 (1-5)	sc	SCI.9-12.PS-5.8	
06331011-7 (1-3)	30	301.9-12.1 3-3.0	Explain how changes in velocity and time affect
Session-8 (1-9)	sc	SCI 9-12 PS-5 3	the acceleration of an object.
00331011-0 (1-0)	00	001.0-12.1 0-0.0	Explain how acceleration due to gravity affects
Session-8 (1-9)	sc	SCI 9-12 PS-5.5	the velocity of an object as it falls.
00001011 0 (1 0)		001.0 12.1 0 0.0	Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-8 (1-9)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-8 (1-9)	SC	SCI.9-12.PS-5.8	
,			Explain how changes in velocity and time affect
Session-9 (1-7)	SC	SCI.9-12.PS-5.3	the acceleration of an object.
			Explain how acceleration due to gravity affects
Session-9 (1-7)	SC	SCI.9-12.PS-5.5	the velocity of an object as it falls.
			Explain the motion of objects on the basis of
			Newton's three laws of motion: inertia; the
			relationship among force, mass, and
Session-9 (1-7)	SC	SCI.9-12.PS-5.7	acceleration; and action and reaction forces.
			Use the formula F = ma to solve problems
Session-9 (1-7)	SC	SCI.9-12.PS-5.8	related to force.
Flight-Testing Newton's Laws			
2005 Science Curriculum Standards			
South Carolina Science			
Grades 9-12 (High			
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Activity/Lesson	State	Standards	
			Apply formulas for velocity or speed and
			acceleration to one and two-dimensional
Session-10 (1-5)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
			time, velocity-time or speed-time, and
Session-10 (1-5)	SC	SCI.9-12.P-2.3	acceleration-time graphs.
, ,			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-10 (1-5)	SC	SCI.9-12.P-2.4	reaction forces.
			Explain the relationships among speed, velocity,
Session-10 (1-5)	SC	SCI.9-12.P-2.10	acceleration, and force in rotational systems.
			Apply formulas for velocity or speed and
			acceleration to one and two-dimensional
Session-1 (1-17)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
			time, velocity-time or speed-time, and
Session-1 (1-17)	SC	SCI.9-12.P-2.3	acceleration-time graphs.
			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-1 (1-17)	SC	SCI.9-12.P-2.4	reaction forces.
			Explain the relationships among speed, velocity,
Session-1 (1-17)	SC	SCI.9-12.P-2.10	acceleration, and force in rotational systems.
			Apply formulas for velocity or speed and
			acceleration to one and two-dimensional
Session-2 (1-10)	SC	SCI.9-12.P-2.2	problems.
			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-2 (1-10)	SC	SCI.9-12.P-2.4	reaction forces.
			Explain the factors that influence the dynamics
Session-2 (1-10)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
			Explain the relationships among speed, velocity,
Session-2 (1-10)	SC	SCI.9-12.P-2.10	acceleration, and force in rotational systems.
			Apply formulas for velocity or speed and
			acceleration to one and two-dimensional
Session-3 (1-6)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
			time, velocity-time or speed-time, and
Session-3 (1-6)	SC	SCI.9-12.P-2.3	acceleration-time graphs.

			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-3 (1-6)	sc	SCI.9-12.P-2.4	reaction forces.
00331011-3 (1-0)		001.5-12.1 -2.4	Explain the factors that influence the dynamics
Session-3 (1-6)	sc	SCI.9-12.P-2.5	of falling objects and projectiles.
06331011-3 (1-0)	30	001.9-12.1 -2.0	or failing objects and projectiles.
			Explain the relationships among speed, velocity,
Session-3 (1-6)	SC	SCI.9-12.P-2.10	acceleration, and force in rotational systems.
			Explain the factors that influence the dynamics
Session-4 (1-11)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
			Apply formulas for velocity or speed and
			acceleration to one and two-dimensional
Session-5 (1-6)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
			time, velocity-time or speed-time, and
Session-5 (1-6)	SC	SCI.9-12.P-2.3	acceleration-time graphs.
			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-5 (1-6)	SC	SCI.9-12.P-2.4	reaction forces.
, ,			Explain the factors that influence the dynamics
Session-5 (1-6)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
	00	0010405040	Explain the relationships among speed, velocity,
Session-5 (1-6)	SC	SCI.9-12.P-2.10	
			Apply formulas for velocity or speed and
0	00	001040000	acceleration to one and two-dimensional
Session-6 ( 1-8)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
		00104000	time, velocity-time or speed-time, and
Session-6 ( 1-8)	SC	SCI.9-12.P-2.3	acceleration-time graphs.
			Interpret the resulting motion of objects by
			applying Newton's three laws of motion: inertia;
			the relationship among net force, mass, and
			acceleration (using F = ma); and action and
Session-6 ( 1-8)	SC	SCI.9-12.P-2.4	reaction forces.
			Explain the factors that influence the dynamics
Session-6 (1-8)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
			Evaluin the relationships among around valuative
Session 6 ( 1 9)	80	SCI 0 40 D 0 40	Explain the relationships among speed, velocity,
Session-6 (1-8)	SC	SCI.9-12.P-2.10	
			Apply formulas for velocity or speed and
0	00	001040000	acceleration to one and two-dimensional
Session-7 (1-5)	SC	SCI.9-12.P-2.2	problems.
			Interpret the velocity or speed and acceleration
			of one and two-dimensional motion on distance-
		0010 10 5 6 6	time, velocity-time or speed-time, and
Session-7 (1-5)	SC	SCI.9-12.P-2.3	acceleration-time graphs.

Socion 7 (1.5)	SC	SCI.9-12.P-2.4	Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and reaction forces.
Session-7 (1-5)			Explain the factors that influence the dynamics
Session-7 (1-5)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
			Explain the relationships among speed, velocity,
Session-7 (1-5)	SC	SCI.9-12.P-2.10	acceleration, and force in rotational systems.  Apply formulas for velocity or speed and
Session-8 (1-9)	SC	SCI.9-12.P-2.2	acceleration to one and two-dimensional problems.
Session-8 (1-9)	SC	SCI.9-12.P-2.3	Interpret the velocity or speed and acceleration of one and two-dimensional motion on distance-time, velocity-time or speed-time, and acceleration-time graphs.
Session-8 (1-9)	SC	SCI.9-12.P-2.4	Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and reaction forces.
Session-8 (1-9)	SC	SCI.9-12.P-2.5	Explain the factors that influence the dynamics of falling objects and projectiles.
Session-8 (1-9)	SC	SCI.9-12.P-2.10	Explain the relationships among speed, velocity, acceleration, and force in rotational systems.
Session-9 (1-7)	SC	SCI.9-12.P-2.2	Apply formulas for velocity or speed and acceleration to one and two-dimensional problems.
Session-9 (1-7)	SC	SCI.9-12.P-2.3	Interpret the velocity or speed and acceleration of one and two-dimensional motion on distance-time, velocity-time or speed-time, and acceleration-time graphs.
			Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and
Session-9 (1-7)	SC	SCI.9-12.P-2.4	reaction forces.  Explain the factors that influence the dynamics
Session-9 (1-7)	SC	SCI.9-12.P-2.5	of falling objects and projectiles.
Session-9 (1-7)	SC	SCI.9-12.P-2.10	Explain the relationships among speed, velocity, acceleration, and force in rotational systems.